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ABSTRACT

The conference summarized in this document represented an exploratory effort concerning the role and objectives of geography, including its predictive capabilities in both studying and directing the future spatial organization of the earth as the home of man. Initial conference presentations by Ronald Abler and William Warntz helped focus attention on two of the key issues which repeatedly emerged during the 2 days of discussion: 1) Can man utilize his abilities for social and technological innovation in ways which will enhance the humanistic qualities of life? 2) How might we as geographers use our skills in promoting environments which are humane and, thus, economically and ecologically viable? Subsequent sessions were based upon the following issues: 1) What are the philosophical and methodological sources to be used in formulating the geography of the future? 2) What are the desired characteristics of future spatial organization, 3) Can we predict future spatial organization? 4) How do we train futuristic geographers and what is their role in policy making? 5) What are the likely settlement and mobility patterns of the future? 6) What is the future of this group? and, 7) What were the results of this conference? The major part of this document consists of succinct representations of the principle arguments advanced on these questions. (Author/JLB)

REPORT AND SUMMARY— CONFERENCE ON GEOGRAPHY OF THE FUTURE 1970

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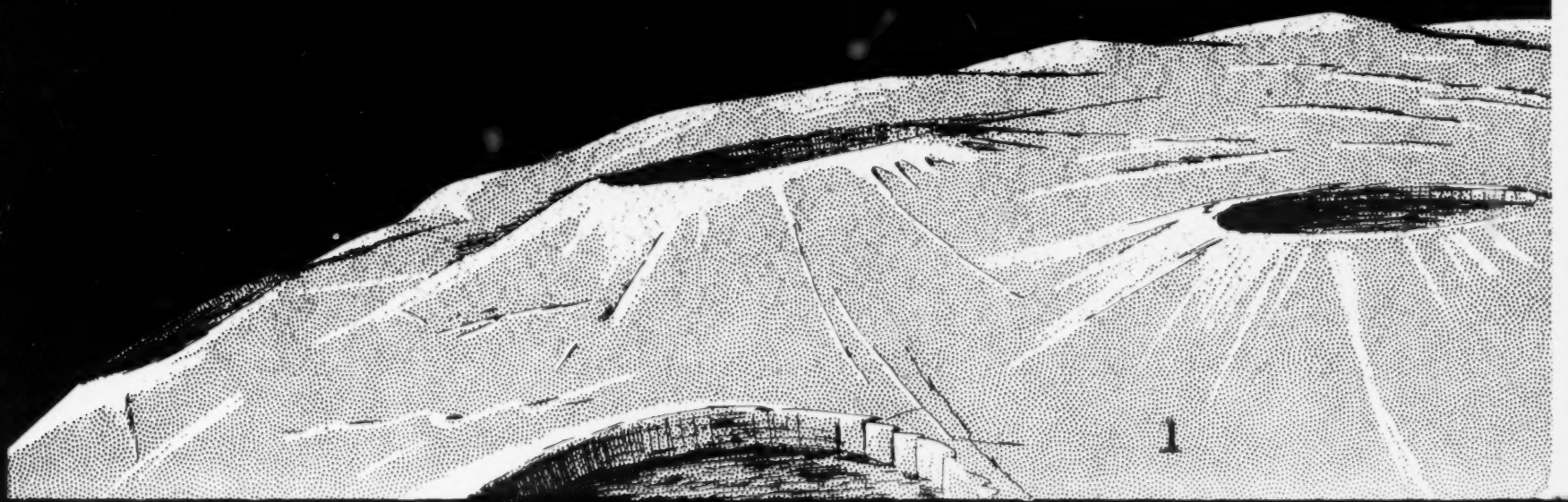

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REPORT AND SUMMARY: CONFERENCE ON THE GEOGRAPHY OF THE FUTURE

Bayfield, Ontario 15-18 October, 1970

This conference represented an exploratory effort concerning the role and objectives of geography, including its predictive capabilities, in both studying and directing the future spatial organization of the earth as the home of man. The conference was convened and organized by Ronald Abler, Donald Janelle and John Sommer. The financial support was provided by The Canada Council and the Department of Geography at The University of Western Ontario. The following geographers, representative of education, government and industry, participated in this conference:

Ronald Abler, Pennsylvania State University.
Larry Bourne, The University of Toronto.
Stanley Brunn, Michigan State University.
William Bunge, The University of Western Ontario.
Hans Carol, York University.
Ian Jackson, The Department of Energy, Mines and Resources, Canada.
Donald Janelle, The University of Western Ontario.
Robert Latham, Bell Telephone of Canada.
Robert McDaniel, The University of Western Ontario.
George Macinko, Central Washington University.
Ross MacKinnon, The University of Toronto.
Allen K. Philbrick, The University of Western Ontario.
Edward G. Pleva, The University of Western Ontario.
Guy Reeves, The Canadian Council on Urban and Regional Research.
Lorne Russworm, The University of Waterloo.
Richard V. Smith, Miami University, Ohio.
John Sommer, Dartmouth College.
William Warntz, Harvard University.
Roy Wolfe, York University.
Wilbur Zelinski, Pennsylvania State University.

The opening session of the conference featured talks by Ronald Abler, "An Introduction to the Geography of the Future", and William Warntz, "The Geography of the Future". These talks helped focus attention on two of the key issues which emerged repeatedly during the ensuing two and a half days of discussion. First, can man utilize his abilities for social and technological

innovation in ways which will enhance the humanistic qualities of life? And, second, how might we as geographers use our skills in promoting environments which are humane and, thus, economically and ecologically viable?

The Agenda for the subsequent sessions was based upon questions which the conference participants thought representative of the issues warranting consideration in such an exploratory effort. These were as follows:

I. What are the Philosophical and Methodological Sources to be Used in Formulating the Geography of the Future?

II. What are the Desired Characteristics of Future Spatial Organization?

III. Can We Predict Future Spatial Organization?

IV. How Do We Train Futuristic Geographers and What is Their Role in Policy Making?

V. What are the Likely Settlement and Mobility Patterns of the Future?

VI. What is the Future of this Group? -- A Business Meeting.

VII. What were the Results of this Conference? -- A Summary Session.

The following statements represent the principal arguments advanced on these questions. The details have been spared and, needless to say, this summary report, regardless of efforts to the contrary, probably contains some of the inherent biases of its author.

I. What are the Philosophical and Methodological Sources to be Used in Formulating the Geography of the Future?

This question received only peripheral consideration during this session. Attention immediately focused on the motivations for this groups concern with the future. After much discussion it was generally agreed

that such concern was based on the overriding sense of insecurity associated with what was perceived to be the acceleration of widespread and interdependent disruptions in man's social and physical worlds. Through tacit consent, this conference did not address itself to the presently presumptuous solutions to these environmental crises; rather, at this stage it seemed necessary to put the future in perspective by seeking some philosophical underpinnings for directing our work as geographers and earthlings. It was agreed that geographers could and should make inherently spatial and substantive contributions by using their skills to anticipate the future and to advantageously guide the forces of change. However, the very seriousness of this work, the complexities of the human and environmental problems we face, and the acknowledged inadequacies of our present skills, suggested that a cautious and introspective beginning would be prudent at this time. To approach this task objectively it was necessary to make the assumption that the more flagrant threats to man's survival (nuclear war, massive social violence, uncontrollable population growth, and sudden detrimental shifts in the physical environment) would not occur.

Although work by futurists in other disciplines was discussed and was considered germane to this conference, a special need for focusing on futurism within the discipline of geography was expressed. Other topics and issues were presented as a prelude to the forthcoming and more specialized sessions -- the ideas generated in these investigations will be summarized under the appropriate headings.

II. What are the Desirable Characteristics of Future Spatial Organization?

This session focused on alternative futures and their relative desirability. Changes in population distributions, life styles and mobility were related to various technological innovations and to modifications in human value systems. The many alternative spatial systems suggested by these changes imposed (according to some) a need for choosing a desirable pattern based upon some objective function. The objective of seeking a settlement form based upon human aspiration was thought desirable; but, as strongly emphasized, it must be weighed against the pressing need to insure man's survival. Thus, the inherent humaneness of future human settlement forms must operate within the constraints of recognized critical ecological variables. The potential for unlimited energy resulting from nuclear fusion was presented as a possible occurrence -- one which would greatly reduce the present constraints of time, space, energy/resource needs and environmental pollution. If this occurs (and some doubted that it would) man may be in a position to fulfill his goals of personal and societal utopias. Thus, with this in mind, the following summary assumptions for Utopia(s) were suggested:

Summary of Assumptions for Utopia(s):

- Insure the maximum freedom of choice,
- The preservation of life and the preservation of the ecosystem,
- The preservation and improvement of the quality of life,
- Manipulation of the quality of life and environment,
- The appreciation of people over property,
- The promotion and enhancement of creativity,

- The toleration and support of diversity,
- The negation of time and space -- to put things, where we want them rather than where we think they have to be.

The ideas presented in this session were further synthesized by Bourne to include the following ecological form principles:

- Maximum diversity of living environments.
- Maximum ability and minimum necessity to participate.
- The convergence of institutional and informational forms.
- The maintenance of individual control mechanisms.
- Built-in adaptability and image permanence.

In considering the above assumptions and principles, it was tacitly agreed that the intuitive (humanistic) approach and the scientific approach could be combined to produce fruitful guidelines for the determination of alternative futures.

III. Can We Predict Future Spatial Organization?

With full understanding that science in general still lacks the necessary theory for accurate prediction, an attempt was made to outline the problems, the prospects, and the possible approaches for forecasting the emergent spatial systems. A distinction was made between non-scientific prediction (expectation, guessing, prophecy and prognosis) and scientific prediction (from M. Bunge, Scientific Research II, The Search for Truth, 1967). Operationally, it seemed difficult to sort out these distinctions; for, given our present state of knowledge, intuitive insights must be relied upon for detecting many of the clues to the future. For instance, as was noted, an alertness to new trends and new life styles foretells a post industrial era of voluntary regionalizations of

people. Through incorporation of our partial understanding of the laws of nature this insight could lead to more precise forecasts based on "lax scientific" prediction. In contrast to this approach, "strict scientific" prediction must rest upon precise identification of the forces, agents and processes of change, and upon quantifiable measurements yielding complete understanding of the laws which control their time-space interplay. In essence, the ultimate goal is to remove all uncertainties over events in the past, present and future. In the meantime, we must acknowledge the risks (costs) associated with faulty predictions based upon incomplete models.

In the quest for an acceptable level of accuracy for prediction, it was maintained by some that a distinction between spatial prediction and event prediction was needed. They suggested that the prerequisite for time-dependent spatial prediction (geographic futurism) is a perfected means of strict spatial forecasting; that is, the regularities of the existing spatial pattern must be understood before one can consistently forecast emerging time-space systems with acceptable precision.

Another view on prediction considered the plan as an instrument for moulding spatial development. The proposal or mere suggestion of a plan creates the potential for at least a partially self-fulfilling forecast. In this context, scientific prediction must also account for the affects of planning and the subsequent effects on planning.

It is possible that the answers to questions raised during this session might yield guidelines for time-dependent spatial prediction. These questions were posed as follows:

- What level in the specification of data precision is necessary to insure an acceptable system of measurement? What is an acceptable level of prediction accuracy?

- In what ways will or should the system of measurement vary with different time controls and space scales?

- What are the forces, agents and processes of time-spatial change?

- What regularities of spatial development are associated with given technological and social innovations?

- How does perception of the organization of spatial systems vary with identifiable sequences of technological and social innovations?

- Are there long range mathematical constants or identifiable cycles (socio-economic and ecologic) which would be useful in predicting the future?

- What are the critical predictions that geographers should seek to make?

The Scenario and Delphi methods were singled out for consideration as predictive techniques. Examples of their use were presented. It was agreed that these and other forecasting methodologies (dynamic programming, Markov chain analysis, morphological analysis, gaming techniques, etc.) should be given prime consideration in a subsequent conference.

IV. How Do We Train Futuristic Geographers and What is Their Role in Policy Making?

In general, belief was expressed that the training of futuristic geographers need not be significantly different from that presently offered. The continued emphasis on theory and techniques (particularly the auto regressive methodologies) was regarded as basic. However, shifts in emphasis were strongly recommended by some. For example, geographers should be trained to operate in geographical "foreign spaces"

(cultures defined by socio-economic characteristics different from their own) and in "intellectual foreign spaces" (at the frontiers of knowledge). Most importantly, geographers must be willing to face the risks of honestly expressing their scientific findings in the context of the social pressures which may entice individuals to "sell out" to "the established power structure".

The increased awareness of social needs, the resultant social responsibilities of the profession and the emerging credibility gap in the social sciences suggested to many that a greater problem solving orientation to teaching and research was essential to meet the needs of both the "establishment of the ins" (industry and government) and the "establishment of the outs" (those socio-economic groups subjected to societal prejudice and lacking effective social-political voice). The Detroit Geographical Expedition was presented as an example of the latter -- a form of "grass roots" geography where professionals have taught their skills to the people so that they might more effectively express their own vested interest in the struggle, to improve the quality of life for their own community.

It was noted that the mutually advantageous relationships between geographic theory and applied geography must be strengthened if geographers are to extend their present contributions to policy making. The utility of the science must rest upon having something to say and then saying it in an appropriate manner to those in a position for taking the necessary actions. Operating on the premise of scientific integrity, it was maintained by some that the strategy or means of forcing an issue may differ depending upon whether the findings are in agreement or in

disagreement with the position of any given interest group(s). These strategies remain to be outlined. However, several successful examples of application of strategy were noted (e.g., Gilbert White in water resources, John Borchert in planning in Minnesota and Julian Wolpert in conflict resolution over noxious planned projects). Ignorance of the communications channels among agencies of government, industry, academics and the people was identified as a major barrier which must be overcome through the efforts and for the benefit of all concerned.

V. What are the Likely Settlement and Mobility Patterns of the Future?

This session was primarily addressed to the consideration of trends in technology and in human values rather than to the specific identification of settlement and mobility patterns. The combination of these changes, it was believed, would represent the primary interplay of those forces shaping the future patterns of human organization on the earth. It was observed that the increasing complexity and size of human built structures (from individual buildings to sprawling metropolitan regions) had greatly intensified the volume of goods and information flows needed to hold the spatial system together. It was observed how such increases have overloaded the existing interrelated economic, sociologic and ecologic systems. To reduce the detrimental stresses resulting from such overloads, it was suggested that the advances in systems understanding and the developments in computer and communications technology were being applied to the organization of a cybernated space-economy in which the work of society and its production will be gradually transferred to the machine. Some viewed this as a trend to be feared and others saw

it as a necessity.

Evident changes in human values (e.g., anonymity, privacy, etc.) were believed to be, in part, a response to stressful overloads -- mental and physical. The spatial implications of these changes are reflected in the recent growth of suburbs about North American cities.

It was noted that the shift to more cybernated economies in the post-industrial world would be accompanied by the gradual abandonment of the work ethic. People will have increasing freedom of choice in their activities and in their locations. To some this suggested the emergence of voluntary regionalizations where personality and human preference would become the primary locational factors. Such a trend necessitates the easy mobility of people, goods and information. And, in this regard, advances in transportation and communications technology portend the gradual negation of the time-space and cost-space constraints on human settlement and mobility. It was observed that this negation of distance and the effort required to overcome it would most likely occur at varying rates for different socio-economic and political groupings. As such, this trend could lead to both the socio-economic convergence and divergence of the "haves" and the "have nots".

At this stage it seemed presumptuous to forecast the spatial patterns that would emerge in response to these trends in technology and human values. The inertia of the existing spatial systems was noted; they have through time absorbed and accommodated a considerable degree of technological and social innovation. And even though this has fostered certain ecological and social problems, most agreed that the pattern of human settlement in the foreseeable future would emerge from and resemble

the form of the existing patterns.

VI. What is the Future of this Group? A Business Meeting.

A. Publicizing Conference Results:

1. The conference organizing committee will forward brief reports on the conference to the Newsletter of the Association of American Geographers and/or The Professional Geographer, to the Canadian Association of Geographers, to the Futurist and to The Canada Council.

2. If thought appropriate by the committee, a report on this conference will be prepared for presentation at the Boston meetings of the Association of American Geographers in April, 1970.

B. Subsequent Conferences:

1. A conference should be called after the participants have made substantive efforts to expand the frontiers of predicting emerging spatial systems.

2. Based upon the results of the above (B-1), a meeting in October 1972 will be seriously considered.

3. Content of future meetings:

i. should include representatives (preferably futurists) from other disciplines.

ii. an expansion of the number of participants should be considered. To many it seemed essential.

iii. sessions will be devoted to specific issues and techniques. Those especially recommended include autoregressive techniques, grass roots geography (as defined in IV) and topical problem areas (e.g., river basin futures, etc.).

C. Publication of Papers:

1. It was agreed among those who submitted papers that they be re-written so as to integrate the main themes of the conference debate. This will allow modification of viewpoints consistent with the reshaping of thought which occurred at this conference.
2. These papers should be rewritten and forwarded to Ronald Abler (Acting Editor) by January 15, 1971.
3. A decision on the publication of these papers in book form will be made by March 1, 1971. Should the decision be made against publication, these papers will be returned to the authors. None of the conference participants are obligated to publish their papers in the conference book. But, if this is their decision, they should so inform the acting editor.
4. Participants are urged to exchange critiques on each others papers. A procedure for expediting this process is under consideration and will be circulated shortly.
5. Those participants who did not prepare papers for the conference are invited to do so, subject to the constraints outlined above.
6. If deemed necessary by the editor(s), the inclusion of other previously published material will be used to supplement the conference volume.
7. All participants have agreed to cross-circulate a bibliography (preferably annotated) on the geography of the future. This will be incorporated in the book. Send approximately thirty copies to Don Janelle by January 15, 1971. He will forward them to other participants.

8. A publisher has not yet been agreed upon. Efforts will be made to secure a commercial publisher. Should this fail, both the Dartmouth Press and The Ontario Geography have agreed to consider this undertaking.

D. Expressions of Appreciation:

1. A special thanks is extended to the representatives of the Detroit Geographical Expedition for their presentation of a very thought-provoking session describing their philosophy of geography, their work in Detroit and their need for assistance from professional geographers and others. Those present included Miss Gwendolyn Warren, Mr. Robert Ward and Mr. Andy Karlin. The D.G.E. Field Notes may be purchased by writing to

Mr. Andy Karlin
10210 Second Street
Detroit, Michigan 48202

2. Sincere appreciation is extended to the Canada Council and to the Department of Geography, The University of Western Ontario for sponsoring this conference.

3. The conference organizers and participants are grateful to the management and personnel of The Little Inn in Bayfield for their excellent service, and to Mr. Chip Ross and Mr. John Fitzsimons (Ph.D. candidates at Western Ontario) for their yeoman-like assistance.

E. Miscellaneous:

1. For the International Geographical Union Congress in Montreal (August, 1972), participants are invited to submit papers on the geography of the future to Allen K. Philbrick for the session on

cultural geography. The deadline for the receipt of papers is September 1971. In addition, Brian J. L. Berry has invited papers on futuristics for inclusion in the meeting of the I.G.U. quantitative commission at Queen's University in Kingston. Request details from Berry directly.

2. Ed Pleva agreed to design a Delphi Approach exercise to be reviewed by the conference organizers and distributed to the participants for completion. This project is well underway. Ed has also prepared a list of resource needs for introducing sections on futuristic geography in the Ontario secondary schools. This list is included. Please correspond directly with Ed if you can be of assistance in this project.

3. IF YOU TAKE EXCEPTION TO REPRESENTATION OF CONFERENCE VIEWPOINTS AS SUBMITTED IN THIS REPORT, SPECIFY NECESSARY MODIFICATIONS TO DON JANELLE PRIOR TO NOVEMBER 30, 1970.

Submitted by: Donald G. Janelle
November 7, 1970.